

OIPE

#2

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/898,659

DATE: 07/20/2001

TIME: 14:16:43

Input Set : A:\C32111.app

Output Set: N:\CRF3\07202001\I898659.raw

3 <110> APPLICANT: Tanksley, Steven D.  
 5 <120> TITLE OF INVENTION: GENE CONTROLLING FRUIT SIZE AND CELL DIVISION IN  
 6 PLANTS  
 8 <130> FILE REFERENCE: 19603/3211  
 C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/898,659  
 C--> 11 <141> CURRENT FILING DATE: 2001-07-03  
 13 <150> PRIOR APPLICATION NUMBER: 60/215,824  
 14 <151> PRIOR FILING DATE: 2000-07-05  
 16 <160> NUMBER OF SEQ ID NOS: 39  
 18 <170> SOFTWARE: PatentIn Ver. 2.1  
 20 <210> SEQ ID NO: 1  
 21 <211> LENGTH: 492  
 22 <212> TYPE: DNA  
 23 <213> ORGANISM: Lycopersicon pennellii  
 25 <400> SEQUENCE: 1  
 26 atgtatccaa cggtaggata taatctaggt ctaatgaaac aaccttatgt tcctctctcac 60  
 27 tatgtatctg cccccggcac caccacggcg cggtaggtcaa ctggtctttg tcaactgtttt 120  
 28 gatgaccctg ctaactgttt agttactagt gtttgccctt gtatcacctt tggacagatt 180  
 29 tctgaaatac taaacaaagg aacaacttca tgtgggagta gaggtgcatt atattgtttg 240  
 30 ctgggactga caggattgcc tagcctatat tcctgcttct acaggtctaa aatgaggggg 300  
 31 caatatgac tggaagaggg accttgtggt gattgtcttg tacatgtatt ctgtgaacct 360  
 32 tgtgctcttt gccagaata cagagagctt aagaaccgtg gctttgatat gggaataggg 420  
 33 tggcaagcta atatggatag acaaagccgg ggagttacca tgccccctta tcatgcaggc 480  
 34 atgaccaggt ga 492  
 37 <210> SEQ ID NO: 2  
 38 <211> LENGTH: 163  
 39 <212> TYPE: PRT  
 40 <213> ORGANISM: Lycopersicon pennellii  
 42 <400> SEQUENCE: 2  
 43 Met Tyr Pro Thr Val Gly Tyr Asn Leu Gly Leu Met Lys Gln Pro Tyr  
 44 1 5 10 15  
 46 Val Pro Pro His Tyr Val Ser Ala Pro Gly Thr Thr Thr Ala Arg Trp  
 47 20 25 30  
 49 Ser Thr Gly Leu Cys His Cys Phe Asp Asp Pro Ala Asn Cys Leu Val  
 50 35 40 45  
 52 Thr Ser Val Cys Pro Cys Ile Thr Phe Gly Gln Ile Ser Glu Ile Leu  
 53 50 55 60  
 55 Asn Lys Gly Thr Thr Ser Cys Gly Ser Arg Gly Ala Leu Tyr Cys Leu  
 56 65 70 75 80  
 58 Leu Gly Leu Thr Gly Leu Pro Ser Leu Tyr Ser Cys Phe Tyr Arg Ser  
 59 85 90 95  
 61 Lys Met Arg Gly Gln Tyr Asp Leu Glu Glu Ala Pro Cys Val Asp Cys  
 62 100 105 110  
 64 Leu Val His Val Phe Cys Glu Pro Cys Ala Leu Cys Gln Glu Tyr Arg  
 65 115 120 125  
 67 Glu Leu Lys Asn Arg Gly Phe Asp Met Gly Ile Gly Trp Gln Ala Asn  
 68 130 135 140

**ENTERED**  
*see page 5*

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70 Met Asp Arg Gln Ser Arg Gly Val Thr Met Pro Pro Tyr His Ala Gly
71 145          150          155          160
73 Met Thr Arg
77 <210> SEQ ID NO: 3
78 <211> LENGTH: 492
79 <212> TYPE: DNA
80 <213> ORGANISM: Lycopersicon esculentum
82 <400> SEQUENCE: 3
83 atgtatcaaaa cggtaggata taatccaggt ccaatgaaac aaccttatgt tctctctcac 60
84 tatgtatctg ccccccggcac caccacggcg cgggtggcga ctggtctttg tcattgtttt 120
85 gatgaccctg ctaactgttt agttactagt gtttgccctt gtatcacctt tggacagatt 180
86 tctgaaatac taaacaaagg aacaacttca tgtgggagta gaggtgcatt atattgtttg 240
87 ctgggattga caggattgcc tagcctatat tccctgtctt acaggtctaa aatgaggggg 300
88 caatatgac tggaagaggg accttgtgtt gattgtcttg tacatgtatt ctgtgaacct 360
89 tgtgtctttt gccaaagaata cagagagctt aagaaccgtg gctttgatat ggggaataggg 420
90 tggcaagcta atatggatag acaaagccga ggagttacca tgccccctta tcatgcaggc 480
91 atgaccaggt ga                                     492
94 <210> SEQ ID NO: 4
95 <211> LENGTH: 163
96 <212> TYPE: PRT
97 <213> ORGANISM: Lycopersicon esculentum
99 <400> SEQUENCE: 4
100 Met Tyr Gln Thr Val Gly Tyr Asn Pro Gly Pro Met Lys Gln Pro Tyr
101 1          5          10          15
103 Val Pro Pro His Tyr Val Ser Ala Pro Gly Thr Thr Thr Ala Arg Trp
104          20          25          30
106 Ser Thr Gly Leu Cys His Cys Phe Asp Asp Pro Ala Asn Cys Leu Val
107          35          40          45
109 Thr Ser Val Cys Pro Cys Ile Thr Phe Gly Gln Ile Ser Glu Ile Leu
110          50          55          60
112 Asn Lys Gly Thr Thr Ser Cys Gly Ser Arg Gly Ala Leu Tyr Cys Leu
113 65          70          75          80
115 Leu Gly Leu Thr Gly Leu Pro Ser Leu Tyr Ser Cys Phe Tyr Arg Ser
116          85          90          95
118 Lys Met Arg Gly Gln Tyr Asp Leu Glu Glu Ala Pro Cys Val Asp Cys
119          100         105         110
121 Leu Val His Val Phe Cys Glu Pro Cys Ala Leu Cys Gln Glu Tyr Arg
122          115         120         125
124 Glu Leu Lys Asn Arg Gly Phe Asp Met Gly Ile Gly Trp Gln Ala Asn
125          130         135         140
127 Met Asp Arg Gln Ser Arg Gly Val Thr Met Pro Pro Tyr His Ala Gly
128 145          150          155          160
130 Met Thr Arg
134 <210> SEQ ID NO: 5
135 <211> LENGTH: 18
136 <212> TYPE: DNA
137 <213> ORGANISM: Artificial Sequence
139 <220> FEATURE:
140 <223> OTHER INFORMATION: Description of Artificial Sequence: B26 Primer

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Input Set : A:\C32111.app

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```

142 <400> SEQUENCE: 5
143 gactcgagtc gacatcga                                18
146 <210> SEQ ID NO: 6
147 <211> LENGTH: 18
148 <212> TYPE: DNA
149 <213> ORGANISM: Artificial Sequence
151 <220> FEATURE:
152 <223> OTHER INFORMATION: Description of Artificial Sequence: B25 Primer
154 <400> SEQUENCE: 6
155 gactcgagtc gacatcga                                18
158 <210> SEQ ID NO: 7
159 <211> LENGTH: 23
160 <212> TYPE: DNA
161 <213> ORGANISM: Artificial Sequence
163 <220> FEATURE:
164 <223> OTHER INFORMATION: Description of Artificial Sequence: ORFXF2 Primer
166 <400> SEQUENCE: 7
167 aaacaacctt atgttcctcc tca                            23
170 <210> SEQ ID NO: 8
171 <211> LENGTH: 20
172 <212> TYPE: DNA
173 <213> ORGANISM: Artificial Sequence
175 <220> FEATURE:
176 <223> OTHER INFORMATION: Description of Artificial Sequence: FW01 Primer
178 <400> SEQUENCE: 8
179 gcccttgat cacccttgga                                20
182 <210> SEQ ID NO: 9
183 <211> LENGTH: 21
184 <212> TYPE: DNA
185 <213> ORGANISM: Artificial Sequence
187 <220> FEATURE:
188 <223> OTHER INFORMATION: Description of Artificial Sequence: GSP1 Primer
190 <400> SEQUENCE: 9
191 gatgatttca ttgatcttgc a                              21
194 <210> SEQ ID NO: 10
195 <211> LENGTH: 36
196 <212> TYPE: DNA
197 <213> ORGANISM: Artificial Sequence
199 <220> FEATURE:
200 <223> OTHER INFORMATION: Description of Artificial Sequence: Abridged
201     Anchor Primer
203 <220> FEATURE:
204 <221> NAME/KEY: unsure
205 <222> LOCATION: (24)..(35)
206 <223> OTHER INFORMATION: N at any position in this sequence is Inosine
208 <400> SEQUENCE: 10
W--> 209 ggccacgcgt cgactagtac gggnggggnn gggngng          36
212 <210> SEQ ID NO: 11
213 <211> LENGTH: 22

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Input Set : A:\C32111.app

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```

214 <212> TYPE: DNA
215 <213> ORGANISM: Artificial Sequence
217 <220> FEATURE:
218 <223> OTHER INFORMATION: Description of Artificial Sequence: GSP2 Primer
220 <400> SEQUENCE: 11
221 taacatgaac atgcagggag tc                               22
224 <210> SEQ ID NO: 12
225 <211> LENGTH: 20
226 <212> TYPE: DNA
227 <213> ORGANISM: Artificial Sequence
229 <220> FEATURE:
230 <223> OTHER INFORMATION: Description of Artificial Sequence: Abridged
231 Universal Anchor Primer
233 <400> SEQUENCE: 12
234 ggccacgcgt cgactagtac                               20
237 <210> SEQ ID NO: 13
238 <211> LENGTH: 20
239 <212> TYPE: DNA
240 <213> ORGANISM: Artificial Sequence
242 <220> FEATURE:
243 <223> OTHER INFORMATION: Description of Artificial Sequence: GSP3 Primer
245 <400> SEQUENCE: 13
246 gggagtcgga gatagcattg                               20
249 <210> SEQ ID NO: 14
250 <211> LENGTH: 164
251 <212> TYPE: PRT
252 <213> ORGANISM: Lycopersicon esculentum2
254 <400> SEQUENCE: 14
255 Met Asn Pro Ser Ala Gln Pro Ala Tyr Gly Glu Lys Pro Met Thr Gly
256 1 5 10 15
258 Val Pro Val Pro Gly Gln Phe Gln Ala Asn His Pro Gly Asn Trp Ser
259 20 25 30
261 Thr Gly Leu Cys Asp Cys Phe Ser Asp Ile Ser Ser Cys Cys Leu Thr
262 35 40 45
264 Cys Trp Cys Pro Cys Ile Thr Phe Gly Gln Ile Ala Glu Ile Val Asp
265 50 55 60
267 Lys Gly Thr Val Ser Cys Gly Ala Ser Gly Ala Leu Tyr Phe Leu Ile
268 65 70 75 80
270 Glu Ala Leu Thr Gly Cys Gly Cys Ile Tyr Ser Cys Phe Tyr Arg Ile
271 85 90 95
273 Lys Met Arg Lys Gln Tyr Met Leu Pro Glu Ser Pro Cys Gly Asp Cys
274 100 105 110
276 Leu Leu His Phe Cys Cys Glu Cys Cys Ala Leu Cys Gln Glu His Arg
277 115 120 125
279 Glu Leu Lys His Arg Gly Tyr Asp Met Ser Ile Gly Trp Gln Gly Asn
280 130 135 140
282 Met Asp Asn Gln Asn Gly Gly Ile Ala Met Ala Pro Gly Val Gln Gly
283 145 150 155 160
285 Gly Met Thr Arg

```

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Input Set : A:\C32111.app

Output Set: N:\CRF3\07202001\I898659.raw

```

289 <210> SEQ ID NO: 15
290 <211> LENGTH: 134
291 <212> TYPE: PRT
292 <213> ORGANISM: Lycopersicon esculentum3
294 <400> SEQUENCE: 15
295 Met Asp Pro Gln Pro Ala Met Tyr Arg Lys Lys Lys Asn Asp Val Pro
296   1          5          10          15
298 Trp Ser Thr Gly Leu Cys Asp Cys Met Ser Asp Pro Lys Asn Cys Cys
299          20          25          30
301 Ile Thr Leu Trp Cys Pro Cys Ile Thr Phe Gly Gln Val Ala Glu Ile
302          35          40          45
304 Ile Asp Lys Gly Ser Asn Ser Cys Gly Val Asn Gly Ala Leu Tyr Thr
305          50          55          60
307 Ile Ile Ile Cys Val Thr Ser Cys Pro Cys Ile Tyr Ser Cys Phe Tyr
308          65          70          75          80
310 Arg Asn Lys Met Arg Gln Gln Tyr Leu Leu Lys Lys Ser Pro Cys Gly
311          85          90          95
313 Asp Cys Leu Val His Cys Phe Trp Glu Ala Cys Ala Leu Cys Gln Glu
314          100          105          110
316 Tyr Arg Glu Leu Lys Asn Gln Gly Val Asp Met Ser Ile Gly Trp His
317          115          120          125
319 Gly Asn Val Glu Arg Gln
320          130
323 <210> SEQ ID NO: 16
324 <211> LENGTH: 168
325 <212> TYPE: PRT
326 <213> ORGANISM: Lycopersicon esculentum4
328 <400> SEQUENCE: 16
329 Met Gly Met Gly Gln Tyr Gln Gln Gly Met Gln Pro Ala Pro Pro Met
330   1          5          10          15
332 Met Gly Ile Pro Phe Lys Pro Ile Leu Pro Thr Glu Ser Trp Lys Thr
333          20          25          30
335 Gly Leu Phe Asp Cys Met Glu Asp Pro Thr Asn Ala Leu Ile Thr Ala
336          35          40          45
338 Cys Phe Pro Cys Leu Thr Phe Gly Gln Ile Ala Glu Ile Val Asp Ser
339          50          55          60
341 Gly Gln Thr Pro Cys Thr Thr Ser Gly Leu Ile Tyr Gly Ala Ile Leu
342          65          70          75          80
344 Met Phe Ile Gly Met Pro Cys Ile Met Ser Cys Thr Tyr Arg Thr Lys
345          85          90          95
347 Leu Arg Ser Gln Tyr Gly Leu Met Glu Ser Pro Ala Pro Asp Trp Val
348          100          105          110
350 Ile His Cys Phe Cys Glu Cys Cys Ala Leu Cys Gln Glu Tyr Arg Glu
351          115          120          125
353 Leu His His Arg Gly Leu Asp Pro Ser Ile Gly Trp Gln Gly Asn Gln
354          130          135          140
356 Ala Gln Lys Gln Asn Met Gln Leu Gln Gln Ala Met Val Pro Ser Ser
357          145          150          155          160
359 Ser Pro Ser His Asp Gly Leu Ile

```

Use of n and / or Xaa has been detected in the  
Sequence Listing. Review the Sequence Listing  
to ensure a corresponding explanation is present  
in the <220> to <223> fields of each sequence  
using n or Xaa.

## VERIFICATION SUMMARY

DATE: 07/20/2001

PATENT APPLICATION: US/09/898,659

TIME: 14:16:44

Input Set : A:\C32111.app

Output Set: N:\CRF3\07202001\I898659.raw

L:10 M:270 C: Current Application Number differs, Replaced Application Number  
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:209 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10  
L:762 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27  
L:765 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27  
L:768 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27  
L:822 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28  
L:886 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30  
L:994 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34  
L:1003 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34  
L:1045 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35  
L:1087 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36  
L:1111 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37  
L:1144 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38